WHAT IS CLAIMED IS:

1. A method for treating conditions of the lungs by decreasing airway responsiveness comprising:

transferring energy to or from an airway wall to alter the airway wall in such a manner that the responsiveness of the airway is reduced.

2. The method of Claim 1, wherein the energy transfer alters the structure of the airway wall.

3. The method of Claim 1, wherein the energy transfer alters the function of the airway wall.

4. The method of Claim 1, wherein the method is used to treat asthma by preventing contraction of the airway.

5. The method of Claim 1, wherein the energy transfer alters the airway in such a manner that the ability of the airway to narrow is impaired.

6. The method of Claim 1, wherein the energy is transferred to the airway by moving an energy transfer device along the airway.

7. The method of Claim 1, wherein the energy is transferred to a portion of the airway by an energy transfer device which creates one or more energy transfer patterns.

8. The method of Claim 7, wherein the energy transfer pattern is a pattern of one or more spots having a rectangular, elliptical, circular, or other

shape.

9. The method of Claim 7, wherein the energy is transferred to the airway in a band pattern covering a full diameter of the airway.

10. The method of Claim 7, wherein the energy is transferred to the airway in a pattern of at least one stripe extending along the airway in a longitudinal or helical pattern.

11. The method of Claim 1, wherein the energy is transferred to the airway at the location of an opening of an airway, a bifurcation, or an opening of a side branch.

12. The method of Claim 1, wherein the energy is transferred to the airway at a segment of the airway between bifurcations, openings, or side branches.

13. The method of Claim 1, wherein the energy is transferred to the airway by activating an energy transfer device, deactivating the energy transfer device, moving the energy transfer device, and reactivating the energy transfer device.

14. The method of Claim 1, wherein the energy transfer alters smooth muscle of the airway wall in such a manner that the responsiveness of the airway is reduced.

15. The method of Claim 14, wherein the ability of the smooth muscle to contract is altered.

16. The method of Claim 15, wherein shortening of all or some of the smooth muscle is reduced or prevented.

17. The method of Claim 14, wherein the energy transfer alters a connection between the smooth muscle and the airway wall.

18. The method of Claim 14, wherein the energy transfer eliminates at least a portion of the smooth muscle.

19. The method of Claim 14, wherein the energy transfer prevents the smooth muscle from replicating.

20. The method of Claim 1, wherein the energy transfer alters mucus producing cells or glands in the airway wall in such a manner that the responsiveness of the airway is reduced.

21. The method of Claim 20, wherein the energy transfer eliminates at least a portion of the mucus producing cells or glands.

22. The method of Claim 20, wherein the energy transfer prevents the mucus producing cells or glands from replicating.

23. The method of Claim 20, wherein the energy transfer alters the ability of the mucus producing cells or glands to produce or secrete mucus.

24. The method of Claim 1, wherein the energy transfer alters production or release of inflammatory mediators in at least a part of the airway.

25. The method of Claim 24, wherein the energy transfer prevents replication of structures producing or releasing inflammatory mediators.

26. The method of Claim 24, wherein the energy transfer eliminates at least a portion of the structures which produce or release inflammatory mediators.

27. The method of Claim 24, wherein the energy transfer alters the ability of structures in the airway to produce or release inflammatory mediators.

28. The method of Claim 1, wherein the energy transfer increases resistance to airway caliber reduction in at least a part of the airway.

29. The method of Claim 28, wherein the increased resistance is produced by thickening or fibrosing the airway wall.

30. The method of Claim 28, wherein the increased resistance is produced by increasing parenchymal tethering.

31. The method of Claim 28, wherein the increased resistance is produced by increasing connection support between the airway and support structures.

32. The method of Claim 1, wherein the energy transfer alters at least a part of the epithelium in the airway wall.

33. The method of Claim 32, wherein the energy transfer eliminates epithelium.

34. The method of Claim 32, wherein the energy transfer stimulates healing of the epithelium.

35. The method of Claim 32, wherein the energy transfer stimulates replacement of the epithelium.

36. The method of Claim 1, wherein the energy transfer alters at least a part of a submucosal layer in the airway wall.

37. The method of Claim 36, wherein the energy transfer reduces a thickness of the submucosal layer.

38. The method of Claim 1, wherein the energy transfer alters mucosal folding.

39. The method of Claim 38, wherein the structure of the airway wall is altered by increasing a number of mucosal folds or decreasing a size of mucosal folds.

40. The method of Claim 1, wherein a photodynamic agent is delivered to the airway wall and the energy transfer stimulates the photodynamic agent.

41. The method of Claim 1, wherein the airways treated are at least 1 mm in diameter.

42. The method of Claim 41, wherein the airways treated are at least 3 mm in diameter.

43. The method of Claim 1, wherein the airways treated are generations 2 through 8.

44. The method of Claim 43, wherein the airways treated are generations 2 through 6.

45. The method of Claim 1, wherein the airway treated are visualizable with a bronchoscope.

46. A method for treating conditions of the lungs by decreasing airway resistance to airflow comprising:

transferring energy to or from an airway wall to alter the airway wall in such a manner that a resistance to airflow of the airway is decreased.

47. The method of Claim 46, wherein the energy transfer alters a structure of the airway wall to increase an effective caliber of the airway.

48. The method of Claim 47, wherein the structure of the airway wall is altered by decreasing a thickness of the airway wall.

49. The method of Claim 46, wherein the energy transfer alters a function of the airway wall to increase an effective caliber of the airway.

50. The method of Claim 49, wherein the function of the airway wall is altered by reducing mucus or mucus plugging.

51. The method of Claim 49, wherein the function of the airway is altered by reducing tissue inflammation.

52. The method of Claim 51, wherein inflammation is reduced by reducing edema or healing epithelium.

53. The method of Claim 49, wherein the function of the airway wall is altered by altering a resting tone of the airway wall.

54. The method of Claim 53, wherein the resting tone is altered by altering the smooth muscle or by denervation.